

Proportional-differential regulator ...

S/103/63/024/002/010/020
D201/D308

the value of the ampere-turns applied to the input terminals. The parameters of an experimental regulator utilizing the above principle were as follows: 1) inactive zone with respect to input current - 8 mA; 2) input resistance - 350 ohms; 3) output power - 14 W, with optimum d.c. load of 36 ohms; 4) non-controllable duration of output pulse, with the magnetic relay 'closed' - 0.018 sec; 5) controllable output pulse duration with the relay 'open' depends on the magnitude of input signal and on the time constant T which may be continuously varied from 5 to 200 sec. The type described can be used for designing highly reliable and economical proportional-integral regulators with independent adjustment of parameters. There are 5 figures and 1 table. ✓

SUBMITTED: July 3, 1962

Card 2/2

ACCESSION NR: AP4033364

S/0103/64/025/003/0416/0423

AUTHOR: Serzhers-Viktorova, V. S. (Moscow)

TITLE: Improving demodulators

SOURCE: Avtomatika i telemekhanika, v. 25, no. 3, 1964, 416-423

TOPIC TAGS: demodulator, halfwave demodulator, semiconductor diode demodulator, balanced demodulator

ABSTRACT: The performance of a phase-sensitive half-wave semiconductor-diode demodulator depends on the initial unbalance, linearity of its modulation characteristic, transconductance, input and output impedances, operating stability, complexity and reliability of the device. Formulas and graphs are developed for determining the forward and reverse unbalances of the demodulator. The reverse unbalance may be considerably reduced by the proper selection of the load impedance; recommended values for DGTs 21-27 Ge diodes and D 201-205 Si

Cord 1/2

ACCESSION NR: AP4033364

diodes are given. To reduce the forward unbalance, the introduction of series resistors is recommended. The residual forward unbalance can be reduced by a balanced circuit which permits an adjustment of the supply voltages applied to the demodulator arms. Orig. art. has: 5 figures and 22 formulas.

ASSOCIATION: none

SUBMITTED: 04Jan63

DATE ACQ: 15May64

ENCL: 00

SUB CODE: EC

NO REF SOV: 004

OTHER: 000

Card 2/2

SERZHERS-VIKTOROVA, V.S. (Moskva)

Improvement of the quality of demodulators. Avtom. i telem. 25
no.3:424-431 Mr '64. (MIRA 17:6)

L 32018-65 EWT(d)/EWP(v)/EPF(n)-2/EWP(h)/EWP(k)/EWP(l) Po-l/Pq-l/Pf-l/Pau-2/
Pg-l/Pu-l/Pk-l/Pl-l IJP(c) WW/BC S/0103/65/016/001/0162/0167

ACCESSION NR: AP5003980

AUTHOR: Serzhers-Viktorova, V. S. (Moscow)

TITLE: Contactless device for pulse-duration modulation intended for discrete automatic-control systems

SOURCE: ¹⁴Avtomatika i telemekhanika, v. 26, no. 1, 1965, 162-167

TOPIC TAGS: pulse duration modulation, automatic control, automatic control design, automatic control system, automatic control theory

ABSTRACT: The development of a new contactless pulse-duration modulator (PDM) is reported. Intended for converting a slow-varying signal into a sequence of PD-modulated variable-repetition-frequency pulses, the FDM comprises a linear time modulator and a control unit, both designed with electron tubes. These technical data are claimed: sensitivity, 0.5 v; maximum input signal amplitude, ± 30 v; linear modulation with a pulse duration within 0.3-0.6 seconds

Card 1/2

L 32018-65

ACCESSION NR: AP5003980

(this range can be shifted); output-pulse constant amplitude, ± 50 v. The FDM is also suitable for pulse-time conversions and for simulating certain discrete automatic-control systems. Orig. art. has: 3 figures.

ASSOCIATION: none

SUBMITTED: 31Jul63

ENCL: 00

SUB CODE: IE, DP

NO REF SOV: 004

OTHER: 000

Card 2/2

MARTINKEVICH, F.S., kand.geograf.nauk; SOBOLEV, Ye.Ya., kand.geograf.nauk;
 BOL'SHAKOVA, V.P., kand.ekonom.nauk; LAPETA, D.D., kand.ekonom.
 nauk; GLADKIY, V.I., kand.geograf.nauk, starshiy prepodavatel';
 ANICHENKO, G.V., kand.geograf.nauk; KOTT, G.Z.; TRUBILKO, N.P.,
 kand.ekonom.nauk; KOROLENKO, I.K., kand.ekonom.nauk; GUTSEV, Ye.G.,
 kand.geograf.nauk; CHERNENKO, V.A.; CHERNYSH, L.P.. Prinimali
 uchastiye: KOZLOVA, A.I.; KOVALEVSKIY, P.V.; MAZURENKO, R.V.;
 KUYEYSHA, Ye.I.; KRYLOVA, V.S.; SERZHINSKIY, I.I.; KURKINA, Z.A.;
 KALECHITS, T.A.. ROMANOVSKIY, N.I., red.; KOSILEVICH, K.R., red.;
 TURTSEVICH, L., red.izd-va; SIDERKO, N., tekhn.red.

[Distribution of the industry of White Russia for the processing
 of agricultural raw materials] Razmeshchenie promyshlennosti BSSR
 po pererabotke sel'skokhoziaistvennogo syr'ia. Minsk, 1959. 193 p.
 (MIRA 13:6)

1. Akademiya nauk BSSR, Minsk. Institut ekonomiki. 2. Zaveduyu-
 shchiy sektorom razmeshcheniya proizvodstva Instituta ekonomiki
 Akademii nauk BSSR (for Martinkevich). 3. Institut narodnogo
 khozyaystva im. V.V.Kuybysheva (for Gladkiy).
 (White Russia--Industries, Location of)

1 20890-66 EWT(m)/EWP(k)/EWP(t) JD/HW

ACC NR: AP60C2581

(A)

SOURCE CODE: UR/0286/65/000/023/0075/0075

AUTHORS: Glumov, Ye. A.; Serzhpinskiy, I. V.

ORG: none

34
B

TITLE: A hydrostatic clamp. Class 47, No. 176763

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 23, 1965, 75

TOPIC TAGS: hydraulic device, hydrostatic extrusion, explosive forming

ABSTRACT: This Author Certificate presents a hydrostatic clamp for stock in an assembly used for hydroexplosive shaping. The unit includes tapered linings mounted on the clamping circle, a cylinder with a piston mounted under the die, and a tubular shaft with a plunger concentrically positioned in respect to the cylinder (see Fig. 1). The design creates a closed system which permits the use of the clamp without the application of a constant source of pressure in the forming process. The piston is spring loaded, and the plunger is connected with a rod which moves out from the cylinder. This rod, after the application of pressure (for example, from a transportable pneumatic cylinder) is fixed in a specified position with the help of an adapter, regulating collar, washer, and nut.

Card 1/2

UDC: 621.044.2-229.312 2

L 20890-b6

ACC NR: AP6002581

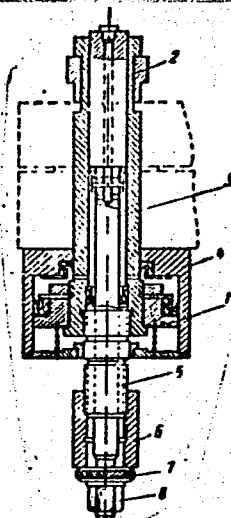


Fig. 1. 1 - piston; 2 - plunger;
3 - rod; 4 - cylinder; 5 - adapter;
6 - regulating collar; 7 - washer;
8 - nut.

This creates a closed system with a constant pull of the clamp. Orig. art. has:
1 figure.

SUB CODE: 13/ SUBM DATE: 12Aug63

Card 2/2 *ULR*

OSTROWSKI, Kazimierz; SERZYNSKI, Wieslaw

Ballistocardiographic changes after effort in patients with mild circulatory insufficiency. Polski tygod. lek. 14 no.15:665-669
13 Apr 59.

1. (Z III Kliniki Chorob Wewnetrznych A. M. w Warszawie: kierownik: prof. dr med. Eugeniusz Kodejszko).

(BALLISTOCARDIOGRAPHY, in various dis.

mild circ. insuf., eff. of exercise (Pol))

(CARDIOVASCULAR DISEASES, physiol.

ballistocardiography in mild circ. insuf.,

eff. of exercise (Pol))

(EXERCISE, eff.

on ballistocardiography in mild circ. insuf. (Pol))

JOCHWEDS, Benjamin; OSTROWSKI, Kazimierz; SERZYSKO, Wieslaw

Effect of intravenous injections of scillaren on the ballistocardiography. Polskie arch. med. wewn. 29 no.6:775-782 1959.

1. Z III Kliniki Chorob Wewnętrznych A. M. w Warszawie Kierownik:
prof. dr med. E. Kodejszko.
(SQUIL, pharmacol.) (BALLISTOCARDIOGRAPHY, pharmacol.)

KODEJSZKO, Eugeniusz; WOLOSZYNSKI, Jerzy; SERZYSKO, Wieslaw

Preliminary studies on the epidemiology of arteriosclerosis among
bank personnel in Warsaw. Postepy hig. med. dosw. 15 no.6:747-751
'61.

1. Z III Kliniki Chorob Wewnetrznych AM w Warszawie Kierownik: prof.
dr E. Kodejszko.

(CORONARY DISEASE statist)
(OCCUPATIONAL DISEASES statist)

JOCHWEDS, Beniamin; CZERNIK, Andrzej; SERZYNSKI, Wlaslaw; NISZCZYNSKA, Maria

Studies on the diagnostic value of cranial rheography in detecting
vascular changes in the so-called primary diabetes in young subjects.
Polskie arch. med. wewnetrz. 31 no.2:169-174 '61.

1. Z III Kliniki Choroób Wewnetrznych A.M. w Warszawie Kierownik:
prof. dr med. E. Kodejszko.

(DIABETES MELLITUS diag) (BRAIN blood supply)

KODEJSZKO, Eugeniusz; SERZYSKO, Wieslaw

Clinical use of oximetry and dye dilution curves. Polskie arch.
med. wewn. 31 no.11:1489-1502 '61.

1. Z III Kliniki Chorob Wewnętrznych AM w Warszawie Kierownik:
prof. dr. med. E.Kodejszko.
(OSIMETRY) (BLOOD CIRCULATION)

POLAND

Beniamin JACOWEDS, Andrzej CZERNIK and Wieslaw SERZYNSKI, Third Internal Medicine Clinic, College of Medicine (III Klinika Chorob Wewnętrznych AM/Akademii Medycznej), Head (kierownik) Prof dr E. KODEJSZKO, Warsaw.

"Rare Case of Cardiac Infarct in 34-Year-Old Woman with Pituitary Dwarfism."

Warsaw, Polski Tygodnik Lekarski, Vol 17, No 45, 5 Nov 1962; pp 1754-1757.

Abstract [English summary modified]: Cardiac infarct in this progeric pituitary dwarf, chronologic age 34, mental age 10, somatic age 4 responded gratifyingly to bed rest, conservative treatment, nitroglycerin. Photograph, 2 roentgenograms, electrocardiogram; 4 Western, 1 Polish ref.

SERZYSKO, Wieslaw

The value of simple oximetric tests in the evaluation of the mechanism and degree of arterial hypoxia. Pol. arch. med. wewn. 33 no.2:139-146 '63.

1. Z III Kliniki Chorob Wewnętrznych AM w Warszawie Kierownik: prof.
dr med. E. Kodejszko.
(OXIMETRY) (ANOXEMIA) (RESPIRATORY INSUFFICIENCY)
(CARDIOVASCULAR DISEASES)

CZERNIK, Andrzej; SERZYSKO, Wieslaw

Usefulness of cranial rheoangiography in detecting cerebral
arteriosclerosis. Pol. arch. med. wewn. 33 no.3:247-252 '63.

1. Z III Kliniki Chorob Wewnetrznych AM w Warszawie Kierownik:
prof. dr med. E. Kodejszko.

(CEREBRAL ARTERIOSCLEROSIS)
(CEREBROVASCULAR CIRCULATION)
(PLETHYSMOGRAPHY)

ORLOWSKA, Krystyna; SERZYSKO, Wieslaw

Evaluation of the simultaneous determination of the oxigram,
minute ventilation and expired-air composition during effort
of brief duration. Pol. arch. med. wewn. 33 no.7:801-805 '63.

1. Z III Kliniki Chorob Wewnętrznych Akademii Medycznej w
Warszawie Kierownik: prof. dr med. E. Kodejszko.
(OXIMETRY) (RESPIRATORY FUNCTION TESTS)
(EXERTION)

ORLIKOWSKA, Wladyslawa; SERZYSKO, Wieslaw; KWIATKOWSKA, Zofia; MALINOWSKI,
Edward; ROGALA, Henryk.

Effect of oxygen saturation and blood pH on erythrocytic
carbohydrate metabolism. Pol. arch. med. wewnet. 34 no.10:
1341-1348 '64

1. Z III Kliniki Chorob Wewnetrznych Akademii Medycznej w
Warszawie (Kierownik: prof. dr. med. E. Kodejszko).

KODEJSZKO, E.; SERZYSKO, W.

Pulmonary circulation. Pol. arch. med. wewnet. 35 no.5:599-605
'65.

SERZYSKO, Wiesław

Some hemodynamic values in chronic cor pulmonale. Pol. arch.
med. wewnet. 35 no.5:673-679 '65.

1. Z III Kliniki Chorob Wewnętrznych AM w Warszawie (Kierownik:
prof. dr. med. E. Kodejszko).

SERZYNSKI, Wiesław. OSTROMSKI, Kazimierz.

Use of the Stewart-Hamilton method in hemodynamic tests. Pol.
arch. med. wewn. 35 no.6:873-877 1965.

1. Z III Kliniki Chorob Wewnętrznych AM w Warszawie (Kierownik:
prof. dr. med. E. Kodejszko).

BIZJAK, Ivan; SELJAK, Franc; SESEK, Pavle, ing.

Automatic control of a Siemens Martin furnace of the Jesenice
Steelworks. Automatika 2 no.1:28-35 Ap '61.

(Automatic control)
(Yugoslavia—Open hearth process)

SESEK, Pavle, inz.

Electrostatic purification of blast-furnace gases. Automatika
3 no.1:16-18 F '62.

KAPLAN, S.Z.; SESEKIN, B.A.

Effect of iron naphthenate on the thermal destruction of polymers
in thickened oils. Khim.i tekhn.topl.i masel 4 no.2:34-37 F
'59. (MIRA 12:2)
(Mineral oils) (Depolymerization) (Naphthenic acids)

KAPLAN, S. Z. ; SESEKIN, B. A.

Effect of oxidation inhibitors on the properties thickened oils.
Zhur. prikl. khim. 33 no.9:2128-2132 S '60. (MIRA 13:10)
(Antioxidants) (Oils and fats)

SESEKIN, N. F.

"The Theory of Special Groups without Torsion," Dok. AN, 70, No. 2, 1950.

Mem., Ural State Univ. im. A. M. Gor'Kiy, -cl950-.

1. SESEKIN, M.F.
2. USSR (600)
4. Mathematics
7. Third mathematical olympiad for students of schools in the city of Sverdlovsk,
Usp.mat.nauk 8 no. 2, 1953.

9. Monthly List of Russian Accessions, Library of Congress, APRIL 1953, Uncl.

SESEKIN, N. F.

PA 246T95

USSR/Mathematics - Nilpotent Groups Mar/Apr 53

"Locally Nilpotent Groups Without Torsion," N. F. Sesekin, Sverdlovsk

"Matemat Sbornik" Vol 32 (74), No 2, pp 407-442

A study of properties of a locally nilpotent group which possesses even a single maximal Abelian subgroup of finite rank, including an investigation of conditions that are sufficient for finiteness of rank, and consequently nilpotency, of locally nilpotent groups. An example is given of torsionless groups of class $w+1$ possessing maximal abelian subgroup of rank 3; also an example of a group without twisting or center which is covered by nilpotent normal divisors.

246T95

SESEKIN, N.F.; STAROSTIN, A.I.

On a class of periodic groups. Usp.mat.nauk 9 no.4:225-228 '54.
(Groups, Theory of) (MLBA 8:1)

SOV/39-46-2-1/6

AUTHORS: Sesekin, N.F., and Shirokovskaya, O.S.
(Sverdlovsk)

TITLE: On a Class of Two-Stage Groups (Ob odnom klasse dvustupennykh grupp)

PERIODICAL: Matematicheskii sbornik, 1958, Vol 46, Nr 2, pp 133-142 (USSR)

ABSTRACT: The authors investigate non-abelian groups different from their commutator group, and all the normal divisors of which are commutative (Be-groups). If the factor group with respect to the commutator group of the Be-group is primary cyclic, then the Be-group is called a Be_1 -group. If the factor group is a direct product of two primary cyclic groups, then the initial group is called a Be_2 -group.

Theorem: In order that G is a Be_2 -group it is necessary and sufficient that G is a finite p -group, the commutator group K of which is cyclic and of prime order p , where G/K is the direct product of two primary cyclic groups; furthermore G has to possess a center Z so that G/Z is the direct product of two cyclic groups of p -th order.

Theorem: G is a Be_1 -group then and only then if G/K is a cyclic group, the order of which is a power of a prime number p , and if G has an abelian subgroup M containing K and having the index p .

Card 1/2

On a Class of Two-Stage Groups

SOV/39-46-2-1/6

Theorem: A group different from its commutator group, all the subgroups of which are commutative, either is commutative itself or it is a finite group of the type of Miller-Moreno [Ref 1]. Two further theorems contain detailed results on p -primary B_{e_1} -groups, where the notions of Chernikov [Ref 4] are used.

There are 5 references, 2 of which are Soviet, 1 German, 1 American, and 1 Swiss.

SUBMITTED: February 20, 1957

Card 2/2

SESEKIN, N.F.

On the product of commutative complete Abelian groups. Mat. zap. Ural.
mat. ob-va UrGU 3 no.3 45-49 '62. (MIRA 18:7)

SELIVANKIN, Sergey Andreyevich; SESENKO, Petr Vasil'yevich; TSYPLAKOV,
Pavel Dmitriyevich; MAKSIMOVICH, A.G., redaktor; MEDRISH, D.M.,
tekhnicheskiiy redaktor

[Jewelry and watches] Iuvelirnye tovary i chasy. Moskva, Gos.
izd-vo torgovoi lit-ry, 1955. 140 p. (MLRA 9:2)
(Jewelry) (Clockmaking and watchmaking)

49208-65

ACCESSION NR: AP5015374

RU/0018/01/000/008/0126/0430

AUTHDR: Schenker, Gunther; Seserman, Ion; Abaitancei, Dan; Tarta, Ion

TITLE: Influence of the geometry of the admission collector on the performances of four-stroke carburetor automobile engines

SOURCE: Constructia de masini, no. 6, 1964, 426-430

TOPIC TAGS: gasoline engine, mechanical engineering

Abstract [Authors' English summary modified]: The authors tested the performance of a four-stroke spark-ignition engine with four cylinders equipped with admission collectors of various sizes, shapes and preheating intensities, and determined the collector geometry that would give maximal performance with the least amount of disturbing phenomena.

Orig. art. has 5 figures, 9 graphs, and 1 table.

ASSOCIATION: none

SUBMITTED: 00
NO REF SOV: 000

ENCL: 00
OTHER: 000

SUB CODE: IE, PR
JPRS

Card 1/1

TH. NICA, I. BALUTEL, B. DERMENGI, GH. POSEA, R. TRIFAN, O. SESERMAN, M. BANICA,
A. SMOLEAC, L. NEGREA.
Institutue of Agronomy.

Study of Properties of Sheepskins Used for Imitation of Coypu Fur.
Anuarul. lucrar. stiint, Inst. Agron., 1957, 335-349.

Abstract: The properties of skins of adult lambs with fine or semifine wool (18 to 34) were studied; imitated coypu fur ("Nutriet") is produced of these skins after processing them by tanning, combing, clipping, dyeing and smoothing. 80 lamb skins of the improved sheep breed "Spanka" were studied with a view to improve the quality of the raw material for manufacturing high quality "Nutriet". The lambs are slaughtered 5 1/2 to 6 1/2 months old, when they weigh not less than 26 kg having been fed well above the Normal. It is shown that the breeding and selection of sheep should be carried out taking into consideration the following specified mean qualitative indices in order to avoid any losses in the wool production and of mean and milk; wool thickness - 18 to 26, wool density - 4000 to 5000 fiber per sq.cm.; the uniformity and elasticity of wool and skin, as well as the satinity and lustry of wool must be good, wool strength, 9.36 - 0.16 g; elongation - 36-8 -0.18% derma thickness 2,32 mm; -70 sqareinches. Grading of the studied skins of sheep of the improved breed "Spanka" after their processing resulted in 57.5% of I class skins, 37.5% of II class skins, 3.8% of III class skins and 1.2% of scrap.

TSITSISHVILI, G.V.; SESIASHVILI, D.D.

Magnetochemical investigation. Trudy Inst. khim. AN Gruz. SHR 13:
17-22 '57. (MIRA 11:4)

(Phenol---Magnetic properties)

SESINA, Franjo, dipl. ekonomist

Operations research in the U. S. A. Automatika 4 no. 5/6
346-352 '63.

1. Elektrotehnicki institut podzeca "Rade Koncar", Zagreb.

CZECHOSLOVAKIA

SESIMOVA, D., MD.

Children's Ward of OUNZ (Detske oddeleni OUNZ), Kladno

Prague, Prakticky lekar, No 19, 1963, pp 750-752

"Experiences with Regional Work System in the Care of
Children of Rural Regions."

SESKUTOV, I.

Prospecting method and new data on the structure of the Pugachev
dome fold. Nov.neft.tekh.:Geol. no.4:4 '48. (MLRA 9:5)
(Pugachev--Petroleum geology)

BUDOV, V.M.; SESKUTOV, Yu.V.

Structural changes in the working channel. Stek. i ker. 22 no.1:
8-10 Ja '65. (MIRA 18:7)

1. Glavnyy inzh. Salavatskogo zavoda tekhnicheskogo stekla (for
Budov). 2. Direktor Salavatskogo zavoda tekhnicheskogo stekla
(for Seskutov).

SESLAVIN, A. A.

PA 14/49 T8

USSR/Electricity
Power Plants, Electric
Efficiency, Industrial

May 48

"First Results of the Introduction of Cost
Accounting in the Plants of the Nikolayevsk TETs,"
A. A. Seslavin, Engr, $\frac{1}{2}$ p

"Elek Stants" No 5

Gives percentages showing savings and explains
methods.

14/49 T8

1. SESLAVIN, A. A., Eng.
2. USSR (600)
4. Lifting and Carrying
7. Storage battery stack truck with a loading capacity of 0.75 tons.
Mekh.trud.rab. 6 no. 10 1952
9. Monthly List of Russian Accessions, Library of Congress, February 1953.
Unclassified.

GESLAVIN, A. A.; BARSHEV, V. N.; Engs.

Coal-Handling Machinery

Using automatic loaders for boiler room coal stocks Mekh. trud. rab. 7, No. 3, 1953.

9. Monthly List of Russian Accessions, Library of Congress, June 1953, Uncl.

9. Monthly List of Russian Accessions, Library of Congress, April 1953, Uncl.

TAKMAN, I.; SESLAVIN, N.N. [translator].

Notes on Linné. Bot.zhur. 42 no.10:1536-1544 O '57.
(Linne, Carl von, 1707-1778)

(MIRA 10:10)

SESZAVSKAYA, T.V.
KONSTANTINOV, Ye.A.; LEVANDOVSKIY, Ye.A.; MISHAKOV, Ye.S.; PEKARSKIY, S.Ya.;
KOVALEV, N.I., otvetstvennyy redaktor; *SESZAVSKAYA, T.V.*, redaktor;
MOZHZEVELOVA, G.B., redaktor IVANYAN, K.N., tekhnicheskiiy redaktor

[Measuring instruments; reference catalog] Izmeritel'nye pribory;
katalog spravochnik. Moskva, Biuro tekhn. informatsii, 1956. 157 p.
(MLRA 10:3)

1. Russia (1923- U.S.S.R.) Ministerstvo radiotekhnicheskoy
promyshlennosti.
(Measuring instruments)

SESLAVINSKIY, Ivan Sergeyevich; KORENEV, A.A., spets. red.; ZAV'YALOVA,
A.N., red.; GERASTIMOVA, Ye.S., tekhn. red.

[Working capital of industrial enterprises] Oborotnye sredstva
promyshlennykh predpriatii. Moskva, Izd-vo ekon. lit-ry,
1961. 63 p. (MIRA 15:1)

(Capital)

SESLAVINSKIY, Ivan Ser yevich; GUROV, S., red.; YAKOVLEVA, Ye.,
tekhn. red.

[The ABC of accounting] Azbuka bukhgalterii. Moskva, Mosk.
rabochii, 1962. 125 p. (MIRA 15:4)
(Accounting)

SESLAVSKIY, V.

School and the mine. Mast. ugl. 8 no.11:25 N '59.(MIRA 13:2)

1.Direktor Stantsii yunogo tekhnika g.Sarani, Karagandinskaya oblast'.
(Karaganda Basin--Technical education)

SESNA, M.

JIROVEC, O.; SESNA, M.

Effect of sunlight on certain strains of Protozoa in natural conditions. Chekh. biol. 3 no.2:119-126 Apr 54.

1. Institut parazitologii biologicheskogo fakul'teta Karlova universiteta i Institut biologii ChSAN, fiziologii rasteniy, Praga.
(PROTOZOA, effect of radiations on,
*sunlight)
(SUNLIGHT, effects,
*on Protozoa)

KALEMBER-RADOSAVLJEVIC, Milica, dr.; BOGDANOV, Lea, sanitetski pukovnik
docent dr.; SESO, Stjepan, sanitetski tehnicar

Identification of staphylococcal enterotoxin by agar precipitation
method. Vojnosanit. pregl. 22 no.5:298-300 My '65.

1. Vojnomedicinska akademija u Beogradu, Higijenski zavod, Mikro-
bioloski institut.

SESONOV, P. ".

Rotov, V. I., Ivanoskiy, I. G., Sitskiy, A. P. and Sesonov, P. K. "Experimenting with the activity of the serum against swine plague prepared with the application of CaCl₂ stimulation," Sbornik trudov Kher'k. vet. in-ta, Vol. XIX, Issue 2, 1948, p. 153-60, - Bibliog: p. 159-60

SO: U-4934, 29 Oct 53, (Letopis 'Zhurnal 'nykh Statey, No. 16, 1949).

ORLOVA, M.P., kandidat tekhnicheskikh nauk; ~~SESOFOVA, V.N.~~, kandidat tekhnicheskikh nauk; TYKACHINSKIY, I.D., kandidat tekhnicheskikh nauk.

Investigating the performance of the VVS machines at high speeds in the Bytoshevskiy and Chagodoshchenskiy glass works. Trudy VNIIS-
Stekla no.36:82-94 '56. (MLRA 9:11)
(Glass manufacture) (Furnaces)

DL 3000VA, V. N.
BOTVINKIN, O.K.; TARASOV, B.V.; SESOPOVA, V.N.

Manufacturing transition glass seals. Prib. i tekhn. eksp. no.1:119-
121 Ja-F '57. (MLRA 10:6)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut stekla.
(Glass-metal sealing)

AUTHORS:

Kerbitskaya, M. V., Orlova, M. P., Smirnov, Ye. I., Shlain, I. P. SOV/72-58-8-2/17 Mesorova, V. N.,

TITLE:

Industrial Experiment in Replacing Sodiumsulphate by Astrachanite
in the Melting of Glass (Promyshlennyy opyt zameny sul'fata
natriya astrakhanitom pri varke stekla)

PERIODICAL:

Steklo i keramika, 1958, Nr 8, pp. 3 - 5 (USSR)

ABSTRACT:

The possibilities of using astrachanite in the melting of glass were investigated at the Institute of Glass (Institut stekla) by S. Ya. Raf' in 1940 - 1953, as well as at the Belorussian Polytechnical Institute (Belorusskiy politekhnicheskiy institut) by A. A. Gezburg in 1941. Besides, the All-Union Institute of Halurgy (Vsesoyuznyy institut galurgii) carried out investigations on the working up of astrachanite from 1947 to 1954. The great attention which was attracted by this mineral may be explained by the fact that huge deposits may be found in the area of the Aral and Caspian Seas (Aral'skoye i Kaspiyskoye morya), the lower Volga (Nizhnyaya Volga) and at a number of other places. The fol-

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Industrial Experiment in Replacing Sodiumsulphate by Astrachanite in the Melting of Glass

SOV/72-58-8-2/17

Following formula holds for the composition of astrachanite:
 $A = 278x / (100 + B)$, where x denotes the percentage of $MgSO_4$
 and B the percentage of H_2O . Earlier papers showed that
 astrachanite may be used only after its homogeneity had been
 improved (Ref 1). At the end of 1954 a working team of the
 Institute of Glass together with the collective of the Kras-
 nousol'sk glass factory carried out a continuous experiment
 of glass melting in a tank furnace with astrachanite. More
 than 400 t of this mineral were used. Its chemical composi-
 tion and the sample taking are given and described. Its work-
 ing up was carried out according to scheme (Fig), and this
 process is then described in detail. By the introduction of
 astrachanite into the charge the properties of glass melting
 are not changed. The comparative data concerning work may
 be seen from Table 2. I. G. Drushinin (Ref 2) showed in his
 paper that astrachanite melts at a temperature of 670° .
 Conclusions:

- 1) Astrachanite may be used to replace sodiumsulfate.
- 2) This increases a little the costs of the charge.
- 3) To use this material successfully a respective preparation must be organized at its place of finding.

Card 2/3

New Tasks and a New Orientation of Our Periodical

SOV/72-58-8-1/17

glass and ceramics. Finally it is stated that the reorganization and improvement of the periodical cannot be solved by the editors alone. It needs the active participation of collaborators in the glass and ceramic industry.

1. Glass industry--USSR
2. Ceramic materials--USSR
3. Periodicals

Card 3/3

BOTVINKIN, O.K.; TARASOV, B.V.; SESOROVA, V.N.

Manufacturing transition glasses and vacuum-sealing junctions.
Biul.tekh.-ekon.inform. no.9:39-40 '58. (MIRA 11:10)
(Glass-metal sealing)

SESKOV V N

STATE 1 FOR PUBLICATION 50/503

Vsesoyuznoye nauchnoissledovaniye po stekloobrazovaniyu i sostoyaniyu. 34, Leningrad, 1959.
Stekloobrazovaniye sostoyaniye: trudy Tret'ego vsesoyuznogo sveshcheniya Leningrad,
16-20 noyabrya 1959 (Vitreous State, Transactions of the Third All-Union Con-
ference on the Vitreous State, held in Leningrad November 16-20, 1959) Moscow,
Izd-vo AN SSSR, 1970. 524 p. First all inserted. 3,600 copies printed.
(Series: Itogi Nauki)

Sponsoring Agencies: Institut khimii silikatov Akademii nauk SSSR. Vsesoyuznoye
khimicheskoye obshchestvo imeni D.I. Mendeleeva and Gosudarstvennyy ordena
Leningra opticheskoy Institut imeni S.I. Vavilova.

Editorial Board: A.I. Avgustinik, V.P. Boronkovskiy, M.A. Ezhborolov, O.K. Potvinin,
V.V. Vargin, A.G. Vlasov, R.S. Kostropov, A.A. Lebedev, N.A. Matveyev, V.S.
Molchanov, R.L. Myller, Ye.A. Ponomarev, Chelmsky, R.A. Toropov, V.A.
Florinskaya, A.K. Yuzhinskiy; Ed. of Publishing House: I.V. Suvorov; Tech. Ed.:
V.T. Bochever.

PURPOSE: This book is intended for researchers in the science and technology of
glasses.
CONTENTS: The book contains the reports and discussions of the Third All-Union
Conference on the Vitreous State, held in Leningrad on November 16-20, 1959.
They deal with the methods and results of studies of the structure of glasses, the
relation between the structure and properties of glasses, the nature of the
chemical bond and glass structure, and the physicochemical properties of glasses. Fused
silica, mechanical properties of glasses are also discussed. A number of the re-
ports deal with the dependence of glass properties on composition, the tinting of
glasses and radiation effects, and mechanical, technical, and chemical proper-
ties of glasses. Other papers treat glass semiconductors and soda borosilicate
glasses. The Conference was attended by more than 200 delegates from Soviet and
East German scientific organizations. Among the participants in the discussions
were R.V. Solomin, Ye. V. Kuznetsov, Yu.A. Gastev, V.P. Pryanishnikov, Yu. Ia.
Gottlib, O.P. Medvedev-Petrovskiy, G.P. Mihaylov, S.M. Petrov, A.M. Lazarev, B.I.
Levin, A.V. Shatilov, N.F. Florkhinskiy, A.Ya. Kuznetsov, E.V. Degtyareva, G.V.
Byrgunovskaya, A.A. Kabanov, N.S. Savvelovich, Z.G. Plinker, and O.S. Holchunova.
Kuznetsov, V.P. Podinov, N.S. Savvelovich, Z.G. Plinker, and O.S. Holchunova.
The final session of the Conference was addressed by Professor I.I. Khitrovskiy,
Honored Scientist and Engineer, Doctor of Technical Sciences. The following
institutes were cited for their contribution to the development of glass science
and technology: Gosudarstvennyy opticheskoy Institut (State Optical Institute),
Institut khimii silikatov AN SSSR (Institute of Silicate Chemistry, AS USSR),
Fizicheskoy Institut AN SSSR (Physical Institute AS USSR), Fiziko-khimiicheskiy
Institut AN SSSR (Physicochemical Institute AS USSR), Institut fiziki AN SSSR,
Minsk (Institute of Physics, AS USSR), Belorusskiy nauchnoissledovatel'skiy
Laboratory of Physical Chemistry of Silicates of the Institut obshchey i neorgani-
cheskoy khimii AN SSSR, Minsk (Institute of General and Inorganic Chemistry,
Academy of Sciences, Belorussian SSR, Minsk), Institut vysokomolekulyarnykh
soyedineniy AN SSSR (Institute of High Molecular Compounds, AS USSR), Gosudarstven-
nyy Institut stekla (State Institute for Glass), Gosudarstvennyy Institut stekla-
lovolokna (State Institute for Glass Fibers), Gosudarstvennyy Institut elektrotex-
nicheskogo stekla (State Institute for Electrical Glass), Sibirskiy fiziko-
khimiicheskiy Institut, Tomsk (Siberian Physicochemical Institute, Tomsk), Leningrad-
skiy gosudarstvennyy universitet (Leningrad State University), Moskovskiy khimiko-
tehnologicheskoy Institut (Moscow Institute of Chemical Technology), Leningradskiy
tehnologicheskoy Institut im. Lenaveta (Leningrad Technological Institute imeni
Lenaveta), Belorusskiy politekhnicheskoy Institut Minsk (Belorussian Polytechnic
Institute, Minsk), Novosibirskiy politekhnicheskoy Institut (Novosibirsk
Polytechnic Institute), and Sverdlovskiy politekhnicheskoy Institut (Sverdlovsk
Polytechnic Institute). The Conference was sponsored by the Institute of Silicate
Chemistry AS USSR (Acting Director - A.S. Gottlib), the Vsesoyuznoye khimicheskoye
obshchestvo im. D.I. Mendeleeva (All-Union Chemical Society imeni D.I.
Mendeleeva), and the Order of Lenin Opticheskoy Institut imeni S.I. Vavilova.
The 15 resolutions of the Conference include recommendations to organize a
Center for the purpose of the coordinating the research on glass, to publish a new
periodical under the title "Fizika i khimiya stekla" (Physics and Chemistry of
Glass), and to join the International Committee on Glass. The Conference was
attended by A.A. Lebedev, Academician, Professor, and Chairman of the Organization of Chem-
ical Sciences; Ye.A. Ponomarev, Academician, Professor, and Chairman of the
Organizational Committee; and R.L. Myller, Doctor of Chemical Sciences, Member
of the Organizational Committee. The editorial board thanks D.M. Bortov
M.V. Vol'kenskiy, L.I. Demina, D.P. Dobychin, B.K. Dubrov, V.A. Ioffe, and
B.T. Kolomyetov. References accompany individual reports.

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15 2120

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S/081/61/000/011/022/040

B103/B202

AUTHORS:

Brekhovskikh, S. M., Sesorova, V. N.

TITLE:

Synthesis and study of the properties of hafnium silicate glasses

PERIODICAL:

Referativnyy zhurnal. Khimiya, no. 11, 1961, 360, abstract 11K310(11K310). (Sb. "Stekloobrazn. sostoyaniya". M. I., AN SSSR, 1960, 444-446 Diskus. 446.)

TEXT: Hf is an analog to Zr and Ti. The chemical stability, thermal resistance, softening temperature, density and refractive index of glasses are increased when Hf is introduced into it. The maximum possible HfO_2 content in the silicate glasses at melting temperatures of 1600 - 1650°C is 32 - 35 wt %. [Abstracter's note: Complete translation.]

Card 1/1

SEBASTYANSKIY, N. N.

Peredovye metody proizvodstva shtukaturnykh rabot / Progressive methods
in plastering/. Moskva, Transzheldorizdat, 1952. 84 p.

SO: Monthly List of Russian Accessions, Vol. 6 No. 11 February 1954

SESSAREVSKIY, A.N., inzhener.

The MK-10 railroad crane. Mekh.stroi. 10 no.6:6-10 Je '53. (MLBA 6:6)
(Cranes, derricks, etc.)

SESSAREVSKIY, Aleksandr Nikolayevich; PAUL', V.P., red.; YUDZON, D.M.,
tekhn.red.

[New construction materials for railroad buildings] Novye materialy
dlia stroitel'stva zheleznodorozhnykh zdani. Moskva, Gos.transp.
zhel-dor.izd-vo, 1954. 69 p. (MIRA 14:4)

(Building materials)
(Railroads--Buildings and structures)

SESSAREVSKIY, A.N.

SESSAREVSKIY, A.N., inzh.

Unit for vibration sinking of pile foundations for electric line
poles. Transp.stroi. 7 no.6:11-15 Je '57. (MIRA 10:11)
(Concrete piling) (Electric lines--Poles)

SESSAREVSKIY, A., inzh.

Constructing a large motor vehicle bridge. Avt.dor. 20 no.7:28-29
Jl '57. (MIRA 10:10)

(New Orleans--Bridges, Concrete)

AUTHOR: Sessarevskiy, A.N., Engineer. SOV/100-58-5-14/15
TITLE: Adjustable Working Platform Mounted on a Lorry. (Montazhnaya Vyshka).
PERIODICAL: Mekhanizatsiya Stroitel'stva, 1958, Nr 5, p 32.
ABSTRACT: This is a description of the above-mentioned working platform, mounted on a lorry, manufactured by "Simon Ltd.", England.
1. Trucks--Equipment 2. Portable platforms--Applications

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SESSAREVSKIY, A.N., inzh.

Some methods for constructing pile foundations for transmission line
supports. Transp. stroi. 8 no. 5:27-28 My '58. (MIRA 11:7)
(Electric lines--Poles)

SESSAREVSKIKH, A.N., inzh.

Assembling tower. Mekh. stroi. 15 no.6:32 My '58.
(Building machinery)

(MIRA 11:6)

GOL'DMAN, .M.S.; SESSAREVSKIY, A.N., glavnyy spetsialist

Broaden the scope of demonstration construction. Transp. stroi.
9 no.4:1-6 Ap '59. (MIRA 12:6)

1. Zamestitel' nachal'nika Tekhnicheskogo upravleniya (for Gol'dman).
(Construction industry) (Transportation)

SESSAREVSKIY, A.N., inzh.

Construction of the Abakan-Taishet railroad line. Transp. stroi.
9 no.11:12-15 N '59 (MIRA 13:3)
(Siberia, Eastern--Railroads--Construction)

SESSAREVSKIY, A.N., inzh.

"Greydoll" excavating machine. Put' i put.khoz. 4 no.8:48 Ag
'60. (MIRA 13:7)

(Excavating machinery)

BARSOV, I.P., inzh.; SESSAREVSKIY, A.N., inzh.

Methods for mechanizing the digging of holes for contact
system supports. Transp.stroi. 10 no.2:12-16 P '60.
- (MIRA 13:5)

(Electric lines--Poles) (Excavating machinery)

SESSAREVSKIY, A.N., inzh.

Reconstruction of the Canadian National Railway. Transp.stroi.
10 no.4:53-54 Ap '60. (MIRA 13:9)
(Canada--Railroads--Maintenance and repair)

SESSAREVSKIY, A.N., inzh.; KANEVSKIY, A.G.

Construction of the Abakan - Tayshet railroad. Transp. stroi.
10 no. 12:5-7 D '60. (MIRA 13:12)
(Railroads--Construction)

ALEKSEYEV, Aleksey Pavlovich, kand.tekhn.nauk; SESSAREVSKIY, A.N., inzh.,
retsenzent; PAUL', V.P., inzh., red.; BOBROVA, Ye.N., tekhn.red.

[Overall mechanization of construction operations in the
electrification of railroads] Kompleksnaya mekhanizatsiya stroi-
tel'nykh rabot pri elektrifikatsii zheleznykh dorog. Moskva, Vses.
izdatel'sko-poligr.ob"edinenie M-va putei soobshcheniia, 1961. 141 p.
(MIRA 14:6)

(Railroads--Electrification)

SESSAREVSKIY, A.M., inzh.

Monorail transit. Transp. stroi. ll no.2:56-58 F '61.

(MT-A 14:2)

(Railroads, Single-rail)

SESSAREVSKIY, A.N., inzh.

Modern tendencies in the development of designs of the
superstructure. Transp. stroi. 12 no.9:9-12 S '62.
(MIRA 16:2)
(Railroads—Track)

SESSAREVSKIY, A.N., inzh.; T3VELODUB, B.I., inzh.

Continuous track in the construction of new railroads. Transp.
stroi. 12 no.10:10-13 0 '62. (MIRA 15:12)
(Railroads--Track)

ALEKSEYEV, Aleksey Pavlovich, kand. tekhn. nauk; DISSON, Pavel Solomonovich, inzh.; SESSAREVSKIY, Aleksandr Nikolayevich, inzh.; SMOL'YANINOV, Aleksandr Andreyevich, kand. tekhn. nauk; SHUPYGIN, Vladimir Pavlovich, kand. tekhn. nauk; SHADRIN, N.A., prof., retsenzent; GOL'SHUKH, V.V., inzh.; ABRAGAM, S.R., inzh., red.; BOBROVA, Ye.N., tekhn. red.

[Construction operations in railroad electrification] Stroitel'-nye raboty pri elektrifikatsii zheleznykh dorog. [By] A.P. Alekseev i dr. Moskva, Transzheldorizdat, 1962. 287 p.
(MIRA 15:12)

(Railroads--Electrification)
(Railroads--Buildings and structures)

ALEKSEYEV, Aleksey Pavlovich, kand. tekhn. nauk; DISSON, Pavel Solomonovich, inzh.; SESSAREVSKIY, Aleksandr Nikolayevich, inzh.; SMOL'YANINOV, Aleksandr Andreyevich, kand. tekhn. nauk; SHURYGIN, Vladimir Pavlovich, kand. tekhn. nauk; SHADRIN, N.A., prof., retsenzent; GOL'SHUKH, V.V., inzh., retsenzent; ABRAGAM, S., inzh., red.; BOBROVA, B.N., tekhn. red.

[Construction work in railroad electrification] Stroitel'nye raboty pri elektrifikatsii zheleznykh dorog. Utverzhdeno Glavnym upravleniem uchebnymi zavedeniyami MPS v kachestve uchebnogo posobiya dlia vysshikh uchebnykh zavedenii zheleznodorozhnogo transporta. [By] A.P. Alekseev i dr. Moskva, Transzheldorizdat, 1962. 287 p. (MIRA 16:2)

(Railroads--Electrification)

SESSAREVSKIY, A.N., inzh.

Rapid method of laying railroad track on French roads. Transp.
stroil. 13 no.10:70-73 0 '63. (MIRA 17:8)

ALEKSEYEV, Aleksey Pavlovich, kand. tekhn. nauk; IVANOV, Igor'
Nikolayevich, inzh.; MALIMANOV, Yuriy Ignat'yevich,
inzh.; SESSAREVSKIY, Aleksandr Nikolayevich;
VELICHKIN, Ye.A., red.

[Handbook on construction work for the electrification of
railroads] Spravochnik po stroitel'nym rabotam pri elek-
trifikatsii zheleznykh dorog. [By] A.P. Alekseev i dr. Mo-
skva, Izd-vo "Transport," 1964. 322 p. (MIRA 17:6)

Magnetic properties as a means of studying metals and alloys. Bohdan Šesták and Ladislav Jeníček (Kladno, Czech.). *Hutnické Listy* 3, 155-62(1950).—A description is given of the influences on the ferromagnetic properties of metals and alloys of the temp., compn., change of phase, and structure, and of the methods and instruments used for investigating these influences. Particular attention is given to the magnetic balance and induction instruments used for investigating the isothermic breakdown of austenite and of the residual austenite, the detn. of the magnetic anisotropy, and the classification of steels on the basis of differences in their magnetic properties. Since all the enumerated factors influence the magnetic properties simultaneously, it is not possible to say conclusively which of the factors is responsible for a change in the magnetic properties of the analyzed specimen. Therefore these methods are mainly used for comparison with a standard. Eugene Gros

Sestak, B.

Distr: 4E2c

21
Permanent magnets from fine powders. Bohdan Šesták (Steel Communication Center, Kladno, Czech.). Pokroky práškové met., Sborník konf., Brno 1953, 290-305 (Pub. 1954).
--Description of prepn. by aid of powder metallurgy of Alnico, iron, MnBi, BaFe₁₂O₁₉, together with the theory (why these materials are permanent magnets), and a crystallographic description of the anisotropy occurring in them. 20 references.

Werner Jacobson

(Retyped clipped abstract)

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mt

SESTAK, B.

Journal of the Iron and Steel Inst.
June 1954
Properties and Tests

3
U
Electromagnetic Induction Tests and Magnetic Flaw Detection Help Metallurgical Industry. B. Sestak. (*Hutnická Listy*, 1953, 8, (7), 346-349; (8), 409-411; (11), 505-506). The principles of electromagnetic sorting methods are explained and factors influencing results are discussed. A Czechoslovakian instrument for the magnetic sorting of ferrous materials is described with examples of its application.—P. P.

SAFETY, ...

"Electromagnetic inductive testing helps metallurgical production." p. 409 (Hutnicke Listy
Vol. 8, no. 8, Aug. 1953. Brno)

SO: Monthly List of East European Accessions, Vol. 3, No. 2, Library of Congress, Feb. 1954
Uncl.

5.2 3/19/43 501011

metals - Heat treatment

3

✓2331* Methods of Study and Control of Heat Treatment of Steel. (Czechoslovakian.) Ladislav Jenicek and Bohdan Sestak. Hutnické Listy, v. 8, no. 10, Oct. 1953, p. 512-521.
Discusses magnetic measurements. Methods are described for determining the beginning of martensite transformation. Diagrams, graphs. 25 ref.

SESTAK, B.

CONFIDENTIAL - PHASE ANALYSIS of Steels 3

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Sestak, B.

Notes ✓ A Study of Austenite Transformations Occurring on Blow Cooling. B. Sestak. *Trans. A.S.T.M.*, 1958, 11, (5), 296-307. (in Czech). A self-recording dilatometer suitable for use with cooling rates as high as 10° C/s, giving an amplification of length changes of up to 1000× is described. Results obtained with it on a ledeburitic 1.4% C, 12.8% Cr steel on continuous cooling are given. — 2

of

SESTAK, B.

Device for preparing monocrystals of metals.

P. 202 (Ceskoslovenska Morfologie. Vol. 5, no. 4, 1957, Praha, Czechoslovakia)

Monthly Index of East European Accessions (EEAI) LC. Vol. 7, no. 2,
February 1958

SESTAK, BOHDAN

E-7

! CZECHOSLOVAKIA/Solid State Physics - Morphology of Crystals.
Crystallization.

Abs Jour : Ref Zhur - Fizika, No 1, 1958, 1040

Author : Sestak, Bohdan

Inst : Physics Institute, Czechoslovak Academy of Sciences,
Prague.

Title : Setup for Growing Single Crystals of Metals.

Orig Pub : Ceskosl. casop. fys., 1957, 7, No 2, 202-208 (cheshck.);
Chakosl. fiz. zh., 1957, 7, No 2, 234-241

Abstract : A construction of a setup is proposed for the growing of
large single crystals of metals (particularly ferromagnetic
metals) from a melt and by the recrystallization method.
The fundamental portion of the setup is a vertical elec-
tric furnace with a molybdenum helix, placed on a tube
made of sintered aluminum oxide, which makes it possible

Card 1/2

CZECHOSLOVAKIA/Solid State Physics - Crystal Morphology.

E.

Abs Jour : Ref Zhur - Fizika, No 7, 1959, 15462

Author : Sestak, Bohdan

Inst : -

Title : Mosaic Structure of Crystals of an Alloy of Iron with Silicon

Orig Pub : Ceskosl. casop. fys., 1957, 7, No 6, 720-722

Abstract : See Ref Zhur Fizika, 1959, No 6, 13085.

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SESTAK, BOHDAN

2

L-11954* (Czech.) Temperature Control in Long-Time Creep Tests. K regulaci teploty při dlouhodobých zkouškách tečení. Bohdan Sestak. Hutnické Listy, v. 12, Mar. 1957, p. 202-208.

The principal types of temperature regulators are evaluated with regard to the severe requirements involved in creep test.

Jim aary

CZECHOSLOVAKIA/Solid State Physics - Crystal Morphology.

Abs Jour : Ref Zhur - Fizika, No 6, 1959, 13035

Author : Sestak, Bohdan

Inst : Institute of Physics, Czechoslovak Academy of Sciences,
Prague, Czechoslovakia.

Title : The Substructure of Crystals of Silicon-Iron Alloy.

Orig Pub : Chekhosl. fiz. zh., 1958, 8, No 1, 90-93.

Abstract : A mosaic substructure, produced by a system of boundaries between individual crystal blocks, was made visible by electrolytic polishing and etching on single crystals of α -iron to which approximately 3.5% of silicon was added; the single crystals were grown by a method previously described (Referat Zhur Fizika, 1958, No 1, 1040).

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act 111
A method of experimentally determining the Burgers
vector of stable dislocations in body-centered cubic crystals.
Bohdan Šesták (Czechoslov. Acad. Sci., Prague). *Czechoslov. J. Phys.* 6:241-2(1958)(in English).—An exptl. method
is described that makes use of the distribution and shape of
surface pits due to etching. A. Kremler

12.9100
24.7500

67006

AUTHOR: Bohdan Šesták

CZECH/37-59-1-13/26

TITLE: On the Mechanism of Making Dislocations^b Visible at the Surface of Crystals of Iron by Anodic Dissolution

PERIODICAL: Československý Časopis Pro Fysiku, 1959, Nr 1, pp 86-93 + 2 plates

ABSTRACT: Several authors have shown that dislocations can be observed by electro-polishing (Refs 7-12). None of these papers have described the mechanism of this process. The present paper is based on a previous paper by the author (Ref 11). A crystal of iron containing 3.2-4.5% of Si and approximately 0.01% of carbon was used. The crystal was annealed at 1350 °C in pure dry hydrogen for 20 hours. The crystal was cut and the samples ground so that surfaces parallel to within 1° with (100), (110), (111), and (112) planes were obtained. Three randomly orientated samples were also prepared. Contrary to the case of germanium (Ref 13), dislocations can be etched on all the surfaces by the same method (Ref 11), (electro-polishing in a mixture of ortho-phosphoric acid, chromium oxide and water). Some of the samples were decarbonised by annealing them for 50 hours in wet

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67006

CZECH/37-59-1-13/26

On the Mechanism of Making Dislocations Visible at the Surface of Crystals of Iron by Anodic Dissolution

hydrogen at 1000 °C and for a further 50 hours in dry hydrogen at the same temperature. On such decarbonised samples, dislocation pits cannot be etched. We concluded that etching occurs in our case by the preferential dissolution of carbides which have been precipitated along dislocation lines and does not readily occur if carbon is not present. In order to obtain further insight into the mechanism of electro-polishing, we measured the electrode potential of the sample as a function of the current density. The electrolyte consisted of: 80 parts H_3PO_4 ; 13 parts CrO_3 ; and 7 parts of water. The anodic polarisation curves are shown in Fig 2 (p 116a). The potential was steadily increased by 0.5 V/min. Curve 1 was registered while the electrolyte was constantly stirred, curve 2 was taken without stirring and curve 3 during continuous decrease in the voltage. Fig 3b shows the polarisation curves in the region of current densities in which etching of dislocations occurs. The sample contained 3.5% Si. The potential is given in volts of the hydrogen scale.

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